



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,986	09/14/2000	Harold Rosen	pd-2000083	8909

20991 7590 03/28/2003

HUGHES ELECTRONICS CORPORATION  
PATENT DOCKET ADMINISTRATION  
BLDG 001 M/S A109  
P O BOX 956  
EL SEGUNDO, CA 902450956

EXAMINER

LEI, TSULEUN R

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 03/28/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/661,986

Applicant(s)

ROSEN ET AL.

Examiner

T. Richard Lei

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/14/2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. Figure 7A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Perahia et al. (U.S. Patent 6,188,896).

Regarding Claim 1, Perahia teaches a method of preventing interference in a communication system comprising the steps of generating a fixed reuse pattern in a service area from a high altitude communications device (Fig.6), said pattern having at least a first resource cell and a second resource cell (Fig.6); selectively suppressing a side lobe of a beam having a first resource so a non-side lobe suppressed portion aligns with a cell having said second resource (Col.5, Lines 8-17, “identifying the interference pattern”, and “providing the desired antenna gain pattern” implying the use of side lobe suppression techniques).

Regarding Claim 2, Perahia teaches a method as recited in claim 1 wherein the step of selectively suppressing comprises the step of reshaping the antenna to suppress side lobe interference at the interference locations (Col.5, Lines 21-25; Col.12, Lines 46-48).

Regarding Claim 3, Perahia teaches a method as recited in claim 2 further comprising the step of maintaining the shape of the antenna in non-interference locations (Col.5, Lines 21-25; Col.12, Lines 40-52).

Regarding Claim 4, Perahia teaches a method as recited in claim 1 wherein said first resource and said second resource comprise a frequency (Col.4, Line 44, frequency reuse).

Regarding Claim 5, Perahia teaches a method as recited in claim 1 wherein said first resource and said second resource comprise polarization (Official Notice: Resource reuse can be

Art Unit: 2684

in many different forms, and polarization is one of them. As an example, see abstract of Linsky et al. , U.S. Patent 6,452,962).

Regarding Claim 6, Perahia teaches a method as recited in claim 1 wherein said first resource and said second resource comprise an orthogonal code (Official Notice: Resource reuse can be in many different forms, and orthogonal code is one of them. As an example, see Col.2, Lines 13-18 of Natali et al., U.S. Patent 6,317,412).

Regarding Claim 7, Perahia teaches a method as recited in claim 1 wherein said high altitude communication device comprises a satellite (Fig.6).

Regarding Claim 8, Perahia teaches a communication system as recited in claim 1 wherein said high altitude communication device comprises a stratospheric platform (Official Notice: The operation of a stratospheric platform and a satellite are very similar, and the method used in one can readily applied to the other).

Regarding Claim 9, see Claim 1 for Perahia's teaching.

Regarding Claim 10, see Claim 7 for Perahia's teaching.

Regarding Claim 11, see Claim 8 for Perahia's teaching.

Art Unit: 2684

Regarding Claim 12, see Claim 4 for Perahia's teaching.

Regarding Claim 13, see Claim 5 for Perahia's teaching.

Regarding Claim 14, see Claim 6 for Perahia's teaching.

Regarding Claim 15, see Claims 1 & 2 for Perahia's teaching.

Regarding Claim 16, see Claim 3 for Perahia's teaching.

Regarding Claim 17, see Claim 1 for Perahia's teaching.

Regarding Claim 18, see Claim 4 for Perahia's teaching.

Regarding Claim 19, see Claim 5 for Perahia's teaching.

Regarding Claim 20, see Claim 6 for Perahia's teaching.

*Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Linsky et al. (U.S. Patent 6,452,962) teaches a satellite system with frequency and polarization reuse, and interference reduction.

Natali et al. (U.S. Patent 6,317,412) teaches a satellite system with increased capacity.

Sherman (U.S. Patent 5,966,371) teaches a method for reducing interbeam interference.

Hassan et al (U.S. Patent 5,946,625) teaches a method for improving co-channel interference.

Hinedi et al. (U.S. Patent 6,088,341) teaches a method for reducing co-channel interference.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. Richard Lei whose telephone number is 703-305-4828. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 703-305-4778. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5403 for regular communications and 703-308-5403 for After Final communications.

Application/Control Number: 09/661,986

Page 7

Art Unit: 2684

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

*TRL*

TRL

March 20, 2003

*Thanh Cong Le*

THANH CONG LE  
PRIMARY EXAMINER

*3/21/03*

*TU6000*